

REMARKS

Claims 1-17, 19 and 20 are pending in the instant application. Claims 1-6, 9-17 and 19-20 stand rejected under 35 U.S.C 102(b) as being anticipated by Szabo et al. (US3,993,065). Claims 1-17, 19 and 20 stand rejected under 35 U.S.C 102(b) as being anticipated by Bucchianeri (US4,424,720). Claim 1 has been amended to more particularly point out and distinctly claim the invention. Basis for this amendment is found in the specification on page 7, line 1. Claim 3 has been amended to correct a minor grammatical error. Applicant respectfully submits that the amendments do not introduce new matter in contravention of 35 U.S.C. §132. Reconsideration is respectfully requested.

Claims 1-6, 9-17 and 19-20 stand rejected under 35 U.S.C 102(b) as being anticipated by Szabo et al. (US3,993,065). This rejection is respectfully traversed.

The present invention provides an adapter for a syringe pump used for dispensing the contents of a hand-held syringe. The adapter is configured to be received by the pump as would a hand-held syringe. The adapter is connectable to the pump. The adapter itself holds the syringe and provides a means of rotationally agitating the contents of the syringe by rotating the syringe.

Szabo on the other hand simply discloses a type of dispensing apparatus that is strapped to a patient. Szabo's device includes a flexible connecting member (24) which extends between the syringe barrel (16) and a power and timing mechanism (14). The flexible connecting member of Szabo basically has an elongate hollow cylindrical shape and incorporates a flexible drive rod (28) for causing the cartridge piston to move upon action by the power mechanism. The flexibility of the connecting member allows the cartridge to be slightly mis-aligned with the power mechanism and thus may conform to the shape of the patient's body. An end connector (20) holds the cartridge against one end of the connector as well as the power mechanism against the other end of the connector.

In order to find anticipation under 35 U.S.C. 102, a reference must disclose each and every element of the claimed invention. Clearly, Szabo fails to disclose each and every element of the present invention as Szabo fails to disclose an adapter connectable between a syringe pump and a hand-held syringe which imparts rotation to the syringe.

Applicant respectfully submits that the Examiner incorrectly characterizes key aspects of the Szabo device. First, in the second and third lines from the end of the first paragraph, the Examiner cites a dispense arm '17' as being rotatably mounted to the drive rod (28). Applicant notes that part '17' is not a dispense arm but is in fact the dispensing end of the syringe (see Col. 2, lines 15-16). Furthermore, part '17' is not connected to the drive rod but is on the far end of the syringe body from the drive rod. Additionally, there is no teaching in Szabo that any part of the device rotates, let alone part '17' and part 28. Therefore, Applicant respectfully submits that there is no support in Szabo for the contention that there is a dispense arm rotatably mounted to the drive rod.

Similarly, another mischaracterization by the Examiner is the contention that Szabo discloses a 'syringe ring' (the Examiner identifies the 'syringe ring' as the end connector 20 of the Szabo device which the driver mechanism (ie, part 28) can cause to rotate. Part 28 of Szabo is the drive rod which linearly extends into the syringe barrel. Applicant notes that there is no linkage between Szabo's drive rod (28) and the connector 20. That is, part 28 is wholly internal to the device while connector 20 is wholly external device and there is no mechanical connection between two components for the movement of one to influence the other.

Furthermore, there is no disclosure in Szabo that the power mechanism (14) imparts any rotational movement whatsoever. In fact, perhaps most importantly, rotational actuation by the power mechanism would frustrate the whole purpose of Szabo. The Szabo device is meant to be attached to the patient and be adaptable to the contours and shape of the patient's body. For this, the Szabo device provides a single attachment point to the patient via the

strap 13 extending from the power mechanism 14. As noted in Col. 2, line 67 to Col. 3, line 6:

Mechanism 14 can, for example, be placed on the upper arm while syringe 16 is placed on the lower arm without the need to immobilize the entire arm of a patient. Thus, syringe 16 can truly be placed at the desired location of infusion of fluid into the patient's body and is no longer restrained by a rigid connection to mechanism 14. (emphasis added).

There is no second attachment point for the Szabo device. Thus, if power mechanism 14 imparted any rotation to either the connecting member (24) or its drive rod (28), the bent shape thereof would dictate that the syringe swing widely about axis of the power mechanism on the patient's upper arm. Because of these resulting rotations, the connecting member (24) and syringe would no longer extend in a direction conforming to the patient's body, thereby fully frustrating the stated purpose of Szabo.

Therefore, because Szabo fails to disclose any rotational movement to be imparted to the syringe, and only allows for longitudinal dispensement from the syringe, Applicant respectfully submits that the device of Szabo fails to anticipate the present invention. Furthermore, because the Szabo device only ties down to the patient at a single point, the Szabo device could not impart rotation to the syringe without frustrating the entire purpose of the cited invention. Applicant respectfully submits that the present invention is thus patentably distinct from Szabo. Reconsideration and withdrawal of the rejection are respectfully requested.

Claims 1-17, 19 and 20 stand rejected under 35 U.S.C 102(b) as being anticipated by Bucchianeri (US4,424,720). This rejection is respectfully traversed.

Bucchianeri discloses a syringe pump.

The Bucchianeri syringe pump includes a traveler mechanism which, by means of selective actuation, is moved into and out of threaded engagement with a lead screw in a manner eliminating the possibility of partial thread engagement and ensuring proper thread alignment before forcing the traveler mechanism into lead screw engagement (Col. 2, lines 62-67). The Bucchianeri apparatus also has a syringe plunger mover (Col. 3, lines 3-10) pivotally mounted for movement between positions of engagement and disengagement with the free end of a syringe plunger. Bucchianeri does not provide any means for rotational agitation of the syringe.

In order to find anticipation under 35 U.S.C. 102, a reference must disclose each and every element of the claimed invention. Bucchianeri fails to do this on several levels.

First, unlike the present invention, Bucchianeri does not disclose an adaptor for a syringe pump, Bucchianeri only discloses a syringe pump. The Examiner recites several parts of the Bucchianeri syringe pump – the traveler rod (15), the crank arm (17), and the traveler mechanism (19) as being an adaptor. Applicant respectfully submits that these parts cannot be said to constitute an adaptor for a syringe pump, as they are integral to the Bucchianeri syringe pump itself. That is, without parts 15, 17, and 19, Bucchianeri would not have a syringe pump at all, just the remaining components for a syringe pump which would be unable to dispense the contents of a syringe.

The present invention is, conversely, an adaptor for a syringe pump. The present invention is clearly claiming a device which operates with a fully functioning syringe pump. Respectfully, the Examiner's reliance on Bucchianeri for a novelty rejection is thus misplaced.

Additionally, Applicant respectfully submits that Bucchianeri also fails to disclose a device which will rotate a syringe. The Bucchianeri syringe pump imparts no rotation to a syringe held within it. The Examiner cites Bucchianeri for disclosing "a guide piston (15), an extension arm (17), and a dispense rod (not numbered) rotatably mounted to the extension

arm". Applicants note that Bucchianeri does not provide for any rotational mounting of these devices to the syringe. The rotational movement discussed by Bucchianeri is simply the turning of the drive screw to linearly displace the crank arm therealong. Bucchianeri provides a long discussion of the design and operation of the traveler mechanism (19) and its cam disks, and how the traveler mechanism may be engaged and disengaged from the drive screw to allow its free sliding therealong back to a starting position. However, there is no disclosure in Bucchianeri that the syringe itself is rotated – the syringe barrel is held stationary.

Thus, as Bucchianeri fails to disclose either an adaptor for a syringe pump or the rotational agitation of a syringe, let alone an adaptor for a syringe pump which imparts rotation to a syringe, Applicant respectfully submits that the present invention is patentably distinct thereover. Reconsideration and withdrawal of the rejection are respectfully requested.

In view of the amendments and remarks, hereinabove, Applicant respectfully submits that the instant application, including claims 1-17, and 19-20, is patentably distinct over the prior art. Favorable action thereon is respectfully requested.

Any questions with respect to the foregoing may be directed to Applicant's undersigned counsel at the telephone number listed below.

Respectfully submitted,

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